IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF TEXAS
DALLAS DIVISION

GLOBAL TEL*LINK CORPORATION	§	
	§	
Plaintiff,	§	
	§	
v.	§	**Civil Action No. 3:14-CV-00829-K**
	§	
SECURUS TECHNOLOGIES, INC.	§	
	§	
Defendant.	§	

APPENDIX TO DEFENDANT SECURUS TECHNOLOGIES, INC.'S SUPPLEMENTAL CLAIM CONSTRUCTION BRIEF

Defendant Securus Technologies, Inc. files this Appendix to Defendant Securus Technologies, Inc.'s Claim Construction Brief.

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Newton's Telecom Dictionary 23rd Edition	39-42
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Respectfully Submitted,

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Securus Technologies, Inc.

CERTIFICATE OF SERVICE

I hereby certify that on July 20, 2015, Defendant electronically filed the foregoing document with the Clerk of the Court, using the CM/ECF system, which will send certification of such filing to all counsel.

/s/ Anthony J. Magee
Anthony J. Magee

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF TEXAS
DALLAS DIVISION

GLOBAL TEL*LINK CORPORATION,	§	
	§	
Plaintiff,	§	
	§	
vs.	§	**Case No. 3:14-cv-00829-K**
	§	
SECURUS TECHNOLOGIES, INC.,	§	
	§	
Defendant.	§	

DECLARATION OF JOSEPH C. McALEXANDER III IN SUPPORT OF DEFENDANT'S SUPPLEMENTAL CLAIM CONSTRUCTION BRIEF

I, Joseph C. McAlexander III, hereby declare and state under penalty of perjury under the laws of the United States of America, as follows:

1. I am the President of McAlexander Sound, Inc., located at 101 W. Renner Rd., Suite 350, Richardson, TX 75082. I am over eighteen years of age and I would be competent to testify as to the matters set forth herein if I am called upon to do so.

2. I have been retained by counsel for the Defendant Securus Technologies, Inc. ("Securus") to prepare this declaration in support of Securus' Supplemental Claim Construction Brief.

3. I am compensated by Securus at the rate of $495.00 per hour. Neither my company nor I derive any compensation contingent upon the outcome in this case.

4. In preparing this declaration, I have reviewed, among other things, the following documents:

a. Judge Kinkeade's Order dated July 9, 2015 (Doc. 145);

b. Second Revised Joint Claim Construction Chart (Doc. 106);

c. GTL's Opening Claim Construction Brief (Doc. 88);

d. Securus' Opening Claim Construction Brief (Doc. 90);

e. GTL's Responsive Claim Construction Brief (Doc. 94);

f. Securus' Responsive Claim Construction Brief (Doc. 96;

g. U.S. Patent No. 7,783,021 (the "'021 patent") and its corresponding prosecution file history; and

h. *Williamson v. Citrix Online, LLC*, Case No. 2013-1130, 2015 WL 3687459 (Fed. Cir. Jun. 16, 2015).

1 QUALIFICATIONS

5. I am a technical expert in the subject matter areas relevant to this litigation, including electronic transfer and comparison of data and other information that requires control, security, and tracking. In forming my opinions, I rely on my knowledge and experience in the fields relevant to this litigation. I further rely on documents and information referenced in this declaration. I am qualified to reach the opinions and conclusions stated in this declaration.

6. I am a Registered Professional Engineer (#79454) in the State of Texas and hold a Bachelor of Science degree in Electrical Engineering from North Carolina State University. I have been associated with the integrated circuit and electronics industry as a designer and consultant for the past 42 years and am a named inventor on 31 U.S. patents and a number of foreign patents.

7. My skills and experience are in areas of circuit design and analysis, device fabrication and assembly, testing, marketing, control system design and analysis, manufacturing operations, software development, management, and respective areas of quality, reliability, and defect/failure analysis. Specifically, I have:

- designed memories, including Dynamic Random Access Memories (DRAMs), Static Random Access Memories (SRAMs), Charge Coupled Devices (CCDs), Shift Registers (SRs), and functional circuits including I/O buffers for address and data, decoders, clocks, sense amplifiers, fault tolerant (incorporating both non-volatile EPROM and random access memory components), parallel-to-serial data paths for video applications, level shifters, converters, pumps, and logic, as well as wireless communication systems and MEMs;

- managed operations including engineering, training, and quality assurance for device fabrication, assembly, test, analysis, and reliability assessment, as well as manufacturing control, each of which involved both volatile and non-volatile memory; testing, analysis, and control involved use of mechanical calibration and measuring equipment, including optical, scanning e-beam, IR, capacitive, and laser using phase contrast and Fast Fourier Transform (FFT) for High Aspect Ratio Inspection (HARI) applications;

- taught courses in solid-state device physics, integrated circuit design, integrated circuit fabrication, and statistical control;

- provided expert services, investigating both process and design technologies of various devices (microprocessor and controller, volatile and non-volatile memory, programmable logic, card, tag, module, mixed signal, custom, and other), systems (PC and peripheral, computer, control, laser measurement, switch, architecture, software, and other), and consumer products (medical, TV, telephone, VCR, facsimile, copier, lighting, game, vehicle, and other); and

- designed and managed development, testing, and evaluation of memory devices and systems incorporating such devices, including simulation of operation. I have also had experience in programming, erasing, and wearout of electrically programmable and erasable non-volatile memories used for program and data storage.

8. Additionally, I have evaluated and provided expert services related to communication and control systems including communication protocol, data transport, query and reporting operations and methods. A more detailed account of my work experience and other qualifications is listed in my Curriculum Vitae attached as Error! Reference source not found. to this declaration.

2 OPINIONS & CONCLUSIONS

9. In preparing this declaration, I reviewed and considered documents and materials, as described above, and relied on my education, experience, and knowledge of the industry as well as my understanding of the applicable legal principles, as explained to me by Securus' attorneys. My opinions and conclusions are based in part on study of those documents, materials, and instructions, and findings resulting from that study.

10. Based on my professional experience, I am familiar with the patent system and the process of applying for and obtaining patents and with the judicial process for construing disputed patent claims and determining whether a patent claim is written in such a way as to invoke the application of 35 U.S.C. § 112, ¶ 6. I have been informed of these legal standards by Securus' attorneys. I am not an attorney, and am relying on instructions from Securus' attorneys for these legal standards. I have experience applying these standards, as reflected in my CV found in **Attachment A** and have written this declaration with these understandings, as detailed below.

11. I understand that, in order to receive a valid patent, an inventor must invent or discover a new and useful process, machine, manufacture, or composition of matter.

12. I understand that patent protection may be granted for any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof.

Level of Ordinary Skill in the Art

13. I understand that factors such as 1) the education level of those working in the field, including the inventor, 2) the sophistication of the technology, 3) the types of problems encountered in the art, 4) the prior art solutions to those problems, and 5) the speed at which innovations are made may help establish the level of skill in the art.

14. I understand that, as of the date of the declaration, the District Court in this matter has not defined the person of ordinary skill in the art.

Legal Standard for Claim Construction

15. The claims of a patent define the invention. The purpose of claim construction is to understand how one skilled in the art would have understood the claim terms at the time of the invention.

16. I have been instructed by counsel on the law regarding claim construction and patent claims and understand that a patent may include two types of claims, independent claims and dependent claims. An independent claim stands alone and includes only the limitations it recites. A dependent claim can depend from an independent claim or another dependent claim. I understand that a dependent claim includes all the limitations that it recites in addition to all of the limitations recited in the claim(s) from which it depends.

17. I have been instructed by counsel that claim construction is a matter of law for the court to decide. Claim terms should be given their ordinary and customary meaning within the context of the patent in which the terms are used, *i.e.*, the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention in light of what the patent teaches.

18. I understand that, to determine how a person of ordinary skill would understand a claim term, one should look to those sources available that show what a person of skill in the art would have understood disputed claim language to mean. Such sources include the words of the claims themselves, the remainder of the patent's specification, the prosecution history of the patent (all considered "intrinsic" evidence), and "extrinsic" evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art.

19. I understand that, in construing a claim term, one looks primarily to the intrinsic patent evidence, including the words of the claims themselves, the remainder of the patent specification, and the prosecution history. I understand that extrinsic evidence, which is evidence external to the patent and the prosecution history, may also be useful in interpreting patent claims when the intrinsic evidence itself is insufficient.

20. I understand that words or terms should be given their ordinary and accepted meaning unless it appears that the inventors were using them to mean something else. In making this determination, however, of paramount importance are the claims, the patent specification, and the prosecution history. Additionally, the specification and prosecution history must be consulted to confirm whether the patentee has acted as its own lexicographer (*i.e.*, provided its own special meaning to any disputed terms), or intentionally disclaimed, disavowed, or surrendered any claim scope.

21. The claims of a patent define the scope of the rights conferred by the patent. The claims particularly point out and distinctly claim the subject matter which the patentee regards as his/her invention. Because the patentee is required to define precisely what he/she claims his invention(s) is (are), it is improper to construe claims in a manner different from the plain import

of the terms used consistent with the specification. Accordingly, a claim construction analysis must begin and remain centered on the claim language itself.

22. Additionally, the context in which a term is used in the asserted claim can be highly instructive. Likewise, other claims of the patent in question, both asserted and not asserted, can inform the meaning of a claim term. For example, because claim terms are normally used consistently throughout the patent, the usage of a term in one claim can often illuminate the meaning of the same term in other claims. Differences among claims can also be a useful guide in understanding the meaning of particular claim terms.

23. I understand that a person of ordinary skill in the art is deemed to read a claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification. For this reason, the words of the claim must be interpreted in view of the entire specification. The specification is the primary basis for construing the claims and provides a safeguard such that correct constructions closely align with the specification. Ultimately, the interpretation to be given a term can only be determined and confirmed with a full understanding of what the inventors actually invented and intended to envelop with the claim as set forth in the patent itself.

24. The role of the specification is to describe and enable the invention. In turn, the claims cannot be of broader scope than the invention that is set forth in the specification. Care must be taken lest word-by-word definition, removed from the context of the patent, leads to an overall result that departs significantly from the patented invention.

25. I understand that claim terms must be construed in a manner consistent with the context of the intrinsic record. In addition to consulting the specification, one should also consider

the patent's prosecution history, if available. The prosecution file history provides evidence of how both the Patent Office and the inventors understood the terms of the patent, particularly in light of what was known in the prior art. Further, where the specification describes a claim term broadly, arguments and amendments made during prosecution may require a more narrow interpretation.

26. I understand that while intrinsic evidence is of primary importance, extrinsic evidence, *e.g.*, all evidence external to the patent and prosecution history, including expert and inventor testimony, dictionaries, and learned treatises, can also be considered. For example, technical dictionaries may help one better understand the underlying technology and the way in which one of skill in the art might use the claim terms. Extrinsic evidence should not be considered, however, divorced from the context of the intrinsic evidence. Evidence beyond the patent specification, prosecution history, and other claims in the patent should not be relied upon unless the claim language is ambiguous in light of these intrinsic sources. Furthermore, while extrinsic evidence can shed useful light on the relevant art, it is less significant than the intrinsic record in determining the legally operative meaning of claim language.

27. I understand that there are special rules of construction for claim elements recited in means-plus-function format. These elements are limited to means that perform the identical function as recited in the element. Moreover, means-plus-function elements are limited to the necessary structures disclosed in the specification, and any equivalents, that correspond to the recited function. I further understand from counsel that the corresponding structure in the specification is "corresponding structure" only if the specification clearly links or associates that structure to the claimed function.

28. I understand that means-plus-function elements are not unbounded and cannot correspond to all means that perform the recited function. I further understand that, when a patent specification fails to link a particular structure to the performance of the function recited in a means-plus-function element, the means element is unbounded by structure and, therefore, is invalid for indefiniteness because the claim does not satisfy the statutory requirements that it be limited to specific structure.

29. I understand the Federal Circuit has recently overruled prior precedent concerning standards relating to the existence, strength, and rebuttal of presumptions as to the applicability of 35 U.S.C. § 112, ¶ 6 that result from the use or non-use of the term "means" in a disputed claim term. I understand that the Federal Circuit in *Williamson v. Citrix Online, LLC*, Case No. 2013-1130, 2015 WL 3687459 (Fed. Cir. Jun. 16, 2015), overruled prior precedent that held that failure to use the term "means" in a claim term created a strong presumption that 35 U.S.C. § 112, ¶ 6 did not apply, and ruled instead that the applicable standard is whether the words of the claim are understood by persons of ordinary skill in the art to have a sufficiently definite meaning as the name for structure, and that the presumption against application of 35 U.S.C. § 112, ¶ 6 is overcome when the claim term fails to recite sufficiently definite structure or else recites function without reciting sufficient structure for performing that function. I also understand that the Federal Circuit held in the *Williamson* decision that use of the word "means" creates a presumption that 35 U.S.C. § 112, ¶ 6 applies and that in determining whether the presumption has been rebutted, the focus remains on whether the claim as properly construed recites sufficiently definite structure.

Person of Ordinary Skill in the Art

30. In my opinion, a person of ordinary skill in the art pertinent to the '021 patent would have a bachelor's degree in electrical engineering, or the equivalent education, and from 3-5 years of technical experience in component design or integration of components into systems, or the equivalent work experience or knowledge of component design in general. Advanced education in electrical engineering might substitute for some of the experience, while extensive experience in design of components might substitute for some of the educational requirements.

"Routing Means"

31. In my opinion, a person of ordinary skill in the art would not have understood the term "routing means," as used in claim 1 of the '021 patent, to recite sufficiently definite structure for the recited routing function. In fact, claim 1 does not recite any structure for the routing means. The term "routing means" is not a term of art and does not connote a definite structure any more than the term "means for routing" connotes a definite structure. While a person of ordinary skill in the art would have been able to devise some structure that could perform the recited routing function – such as a hub, a gateway, or a router – the claim itself, even construed in light of the specification (which uses the terms "routing means" and "router" at various times and refers to a gateway comprising "routing means"), does not inform the person of ordinary skill in the art what structure, if any, is claimed in claim 1 of the '021 patent.

"Central Platform," "Apparatuses" For Processing Said Telephone Call

32. In my opinion, a person of ordinary skill in the art would not have understood the terms "central platform," as used in claims 1, 7, and 16 of the '021 patent, "central platform comprises one or more apparatuses," as used in claim 1 of the '021 patent, or "central platform

includes one or more apparatuses," as used in claim 7 of the '021 patent, to recite sufficiently definite structure for the recited function of "processing said telephone call." To the person of ordinary skill in the art, a "platform" or an "apparatus" could be a multitude of tangible or intangible things comprising hardware, software, or a combination of the two. However, the claim language itself, construed in light of the specification, does not provide the person of ordinary skill in the art with any, let alone a definite, description of structure for performing the recited function of processing said telephone call.

I declare under penalty of perjury that the foregoing testimony is true and correct.

Dated: July 20, 2015

Joseph C. McAlexander III

CURRICULUM VITAE **Joseph C. McAlexander III**

PROFESSIONAL SUMMARY

Currently a Registered Professional Engineer (#79454) and recognized as an inventor on 31 US and a number of foreign patents, I am President of McAlexander Sound, Inc., and the Managing Director of McAlexander Sound Pte Ltd. I have focused my expertise to support a number of clients in product, process, and operations analysis and investigation. Thirty-nine years of experience in microcircuit and semiconductor technologies has developed my skills in areas of circuit design and analysis, device fabrication and assembly, testing, marketing, control system design and analysis, manufacturing operations and respective areas of quality, reliability, and defect / failure analysis. I am, among others, a Manager with QM Partners, LP, supporting clients in IP management, and the President and CEO of MDFHoldings, Inc., an IP holding company currently engaged in the field of GPS Tracking. I have:

- designed Dynamic Random Access Memories (DRAMs), Static Random Access Memories (SRAMs), Charge Coupled Devices (CCDs), Shift Registers (SRs), and functional circuits including I/O buffers for address and data, decoders, clocks, sense amplifiers, fault tolerant, parallel-to-serial data paths for video applications, level shifters, converters, pumps, and logic, as well as wireless communication systems and MEMs applications;

- managed operations including engineering, software programming, training, and quality assurance for device fabrication, assembly, test, analysis, and reliability assessment, as well as manufacturing control (testing, analysis, and control involved use of mechanical calibration and measuring equipment, including optical, scanning e-beam, IR, capacitive, and laser using phase contrast and FFT for HARI applications); managed software program development departments for assembly manufacturing, process control, and testing;

- taught courses in solid state device physics, integrated circuit design, integrated circuit fabrication, and statistical control;

- provided expert services, investigating both process and design technologies of various devices (microprocessor and controller, memory, programmable logic, card, tag, module, mixed signal, custom, and other), systems (PC and peripheral, computer, control, laser measurement, switch, architecture, software, and other), and consumer products (medical, TV, telephone, VCR, facsimile, copier, lighting, game, and other); and

- provided nuclear radiation hardness testing services for military and space clients.

From 1986-1990, I was Executive Vice President of EPI Technologies, Inc., prior to joining the staff at Cochran Consulting, Inc. where I served as senior managing consultant from 1991-2002. From 1972 to 1986, I was employed by Texas Instruments Incorporated - two years as the Quality and Reliability Manager for the 256K DRAM wafer fabrication facility, three years as the Engineering/QRA Manager for the TI Singapore test and assembly operation, and nine years in semiconductor design and product engineering management functions.

CURRICULUM VITAE **Joseph C. McAlexander III**

EXPERIENCE PROFILE

2006-present **QM Partners, L.P.** – Texas
Manager

o Management of development, licensing, prosecution and exploitation of intellectual property.

2006-present **Guardian Technologies, LLC** – Texas
Manager

o IP holding and licensing company.

2006-present **Appropriate Holdings, LLC** – Delaware
Manager

o IP holding company.

2005-present **McAlexander Sound Pte Ltd** - Singapore
Managing Director

o System, Product, and Process investigation, expert witness services for protection of intellectual property;

o Patent portfolio development and valuation;

o Contract consultation.

2002-present **MDFHoldings, Inc.** – Las Vegas, NV
CEO

o IP holding and licensing company.

1996-2010 **RMC Management, LLP** - Plano, TX
Partner

o Asset management.

EXPERIENCE PROFILE (continued)

1988-present **McAlexander Sound, Inc. (McASI)** - Plano, TX
President

o System, Product, and Process investigation, expert witness services for protection of intellectual property;

o Patent portfolio development and valuation;

o Product liability and insurance claim investigation, expert witness services for matters involving such claims;

o Quality Systems consulting and engineering;

o Radiation Hardness Testing Technical Representative;

o Technical Advisor in High Aspect Ratio and Surface Contour Measurement using Direct-to-Digital Holography.

1991-2002 **Cochran Consulting, Inc. (CCI)** - Richardson, TX
Managing Consultant

o System, Product, and Process investigation, expert witness services for protection of intellectual property;

o Design, process, and product reliability;

o Defect and failure analysis.

1986-Nov'90 **EPI Technologies, Inc.** - Richardson, TX
Executive Vice President and Company Officer

o Managed Advanced Technology Div., QA, and Engineering, including software program development;

o Developed strategic, space/energy market growth plans;

o Negotiated the acquisition of a radiation company;

o Designed and managed physical analysis, radiation effects, and environmental stress laboratories, including optical and e-beam measurement;

EXPERIENCE PROFILE (continued)

o Achieved > 30% annual revenue growth and profitability for each laboratory the first 12 months;

o Product and Process investigation services for protection of intellectual property.

1972 – 1986 **Texas Instruments, Inc.** - Dallas/Houston, TX; Singapore

'84 - '86 **Quality/Reliability Assurance Manager, TI Dallas** Advanced DRAM semiconductor wafer fabrication facility

o Developed/implemented on-line, computerized SPC software tools for dimensioning analysis and control and pattern recognition;

o Coordinated people development, design-of-experiments;

o Managed chemical and physical analysis laboratories;

o Implemented control systems to assure product, process, material, equipment, and facility compliance, including Cost of Quality analysis.

'82 - '84 **Quality/Reliability Assurance and Engineering Manager, TI Singapore** assembly/test facility

o Developed, implemented, and operated an effective Quality/Reliability Assurance program for assembly processing including optical pattern recognition for equipment registration;

o Supervised 225 people for 7 day/week operation, including QRA, Computer Systems software development, and Training;

o Trained engineers in Solid State Physics, device fabrication, and statistical process control.

EXPERIENCE PROFILE (continued)

'81 - '82 **Engineering Operations Manager, TI Houston**

o Managed DRAM memory product cost center;

o Responsible for division test software generation, product assembly and test quality / yield, cost reduction and quality improvement;

o Provided technical customer interface for marketing;

o Coordinated TI Singapore engineering test/assembly.

'79 - '81 **Product Engineering Manager, TI Houston**

o Responsible for yield improvement, technical customer interface, quality improvement, design evaluation, and device characterization for DRAM and CCD products;

o Developed device specifications and test software.

'72 - '79 **Design Section Manager / Engineer, TI Houston**

o Responsible for design and development, process compatibility, production introduction of Dynamic Ram products;

o Activities included electrical and physical layout, SPICE model simulation, test program generation, and product implementation for MOS Dynamic Ram products.

1969 - 1972 **U. S. Army** - Coventry, Rhode Island; Seoul, Korea
Captain, Air Defense Artillery

o Served one year as Communications Officer in Korea;

o Served two years as Tactical Officer, New England Defense.

CURRICULUM VITAE **Joseph C. McAlexander III**

ORGANIZATIONS, PUBLICATIONS, EDUCATION

PROFESSIONAL ORGANIZATIONS AND AWARDS

1 - Institute of Electrical and Electronics Engineers, Inc. (IEEE), Senior Member. Societies: Computer, Electron Devices, Solid State Circuits

2 – Licensing Executives Society (LES)

3 – National Society of Professional Engineers

4 – Texas Board of Professional Engineers, Registered License #79454

5 – Society of Flight Test Engineers

5 - 2000/2001 Nationwide Register's Who's Who in Executives and Businesses

6 - 1996/1997 Strathmore's Who's Who Registry of Business Leaders

PUBLICATIONS

1- NUS Proceedings of Engineering Convention '83, Aug '83, pgs. 139-142, The Memory Challenge.

2- Archives of Biochemistry and Biophysics, Dec'81, Vol. 212, No. 2, Equilibrium Constants under Physiological Conditions for the Reactions of D-3-Phosphoglycerate Dehydrogenase and L-Phosphoserine Aminotransferase.

3- International Electron Devices Meeting, Dec '79, pgs. 355-357, Sub 100ns 16K x 1 MOS Dynamic RAM Using a Grounded Substrate.

EDUCATION PROFILE

1980 - 1985	Taught Solid State Device Physics, Semiconductor Processing, and Circuit Design Techniques Taught Statistical Quality Control methods Effectiveness Training and Japanese Manufacturing Techniques, Participative Problem Solving courses
1975 - 1976	1.5 years Graduate study in Neural Science, the University of Texas Graduate School of Biomedical Science
1965 - 1969	BSEE, North Carolina State University

PATENTS (US-31 Foreign-8)

4,239,993	(1980) High Performance Dynamic Sense Amplifier with Active Loads
4,280,070	(1981) Balanced Input Buffer Circuit for Semiconductor Memory
4,288,706	(1981) Noise Immunity in Input Buffer Circuit for Semiconductor Memory
4,370,575	(1983) High Performance Dynamic Sense Amplifier with Active Loads
4,418,293	(1983) High Performance Dynamic Sense Amplifier with Multiple Column Outputs
4,533,843	(1985) High Performance Dynamic Sense Amplifier with Voltage Boost for Row Address Lines
4,543,500	(1985) High Performance Dynamic Sense Amplifier Voltage Boost for Row Address Lines
4,543,501	(1985) High Performance Dynamic Sense Amplifier with Dual Channel Grounding Transistor
4,748,349	(1988) High Performance Dynamic Sense Amplifier with Voltage Boost for Row Address Lines
6,172,640 B1	(2001) Pet Locator
6,236,358 B1	(2001) Mobile Object Locator
6,421,001 B1	(2002) Object Locator
6,441,778 B1	(2002) Pet Locator
6,480,147 B2	(2002) Portable Position Determining Device
6,518,919 B1	(2003) Mobile Object Locator
6,771,213 B2	(2004) Object Locator
59,171 B2	(2005) Mobile Object Locator

PATENTS (continued)

7,113,126 B2	(2006) Portable Positioning Determining Device
7,179,674 B2	(2007) Bi-Directional Released-Beam Sensor
7,209,075 B2	(2007) Mobile Object Locator
7,324,044 B2	(2008) Object Locator
7,336,227 B2	(2008) Portable Position Determining Device
7,340,260 B2	(2008) System and Method for Tracking the Location of Multiple Mobile Radio Transceiver Units
7,353,706 B2	(2008) Weighted Released-Beam Sensor
7,397,097 B2	(2008) Integrated Released Beam Layer Structure Fabricated in Trenches and Manufacturing Method Thereof
7,564,405 B2	(2009) Object Locator
7,657,265 B2	(2010) System and Method for Tracking the Location of Multiple Mobile Radio Transceiver Units
7,760,137 B2	(2010) Portable Positioning Determining Device
7,764,228 B2	(2010) Portable Positioning Determining Device
7,989,906 B2	(2011) Bi-Directional released-Beam Sensor
8,334,775 B2	(2012) RFID-Based Asset Security and Tracking System, Apparatus and Method
JP 55-053640 B4	(1980) Defect Resistant Semiconductor Memory Cell
JP 59-044720 B4	(1984) Semiconductor High Speed Read/Write Memory Unit
DE2935121 C2	(1980) Clock Voltage Generator for Semiconductor Memory with Reduced Power Dissipation
DE3043651 A1	(1981) Clock Voltage Generator for Semiconductor Memory with Reduced Power Dissipation
GB2032211 B2	(1980) High Performance Dynamic MOS Read/Write Memory

PATENTS (continued)

EP 1 557 058 B1	(2011) System and method for tracking the location of multiple mobile radio transceiver units [States: AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IT LI LU MC NL PT RO SE SI SK TR]
EP 1 676 809 B1	(2010) Weighted released-beam sensor [States: DE FR GB IT]
EP 1 676 810 B1	(2010) Bi-directional released-beam sensor [States: DE FR GB IT]

CASES

Cases over at least the past 5 years, either active or closed, in which I have signed a Protective Order, have testified as an expert either at a trial, hearing, or deposition, or have submitted statements / opinions, are:

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Micron* v. Rambus (*firm: Weil Gotshal)	00-792-RRM	Wilmington, DE	2000-2009	P,t
(Patents related to RDRAM, synchronous clocks applied against SDRAMs)				
Rambus v. Samsung* (*firm: Weil Gotshal)	C 05-02298 WDB C 05-02398 RMW	San Jose, CA	2005 - 2009	P
(Patents related to RDRAM, synchronous clocks applied against SDRAMs)				
Rambus v. Samsung* (*firm: Weil Gotshal)	C 05 00334 EDL C 05 00334 RMW	San Francisco, CA	2005 - 2009	P
(Patents related to RDRAM, synchronous clocks applied against SDRAMs)				
Rambus v. Micron* (*firm: Weil Gotshal)	C 06-00244 RMW	San Jose, CA	2006 - 2009	P,t
(Patents related to RDRAM, synchronous clocks applied against SDRAMs)				
FormFactor v. Phicom* (*firm: Mitchell Silberberg)	05-6062-HO	Oregon	2005 - 2009	P
(Patents related to probe cards)				
Mosaid v. Micron* (*firm: Kirkland & Ellis)	2:06-CV-302-DF	ED, TX	2006 - 2009	P, t
(Patents related to memory devices)				
Fenner* v. Microsoft et al (*firm: Fulbright & Jaworski)	6:07-CV-08 (LED)	Tyler, TX	2007 - 2009	P, t
(Patent related to joystick interface to low voltage port)				
Agere v. Samsung* (*firm: Quinn Emanuel)	2-06-CV-185 (TJW-CE)	ED, TX	2007 - 2010	P
(Patent License Dispute)				

[1] * = Client

[2] P = Patent; C = Contract; TS = Trade Secret, AT = Antitrust; CA = Class Action; t = testified

Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
DESA* v. EML (*firm: Fitch Even)	8-04-0160	MD TN, Nashville	2008 - 2009	P
(Patent related to lighting)				
DCS* v. McData (*firm: Haynes Boone)	3:06-CV-812-L	ND TX, Dallas	2008 - 2009	C, t
(Breach of Contract)				
Bennett Marine v. Lenco* (*firm: Malen Haley)	04-cv-60326-KAM	SD FL, Ft Laud.	2008-2009	P, t
(Patent related to Automated Boat Trim Retraction)				
Samsung* v. ON Semi (*firm: Kirkland & Ellis)	07-CV-449 (JJF)	DE	2008-2009	P
(Patents related to circuits and process)				
FormFactor v. Phicom* (*firm: Finnegan, Henderson, F G & D)	337-TA-621	ITC	2008 - 2009	P, t
(Patents related to probe cards)				
Orica* v. Austin Powder (*firm: McDermott Will	CV-07-3337-AHM	CD CA,	2008 - 2010	P
(Patents related to blasting electronic controls)				
AMS* v. Crane & Seaga (*firm: Davidson Berquist	3:03-CV88-JPB, 3:08-CV-97-JPB and 3:04-CV-80,75,48	ND WVA	2008-2012	P, t
(Patents related to vending machines)				
Myriad v. Alltech, Inc.* (*firm: Duane Morris)	1:08-CV-00253-SS	WD TX, Austin	2008 - 2010	TS, t
(Trade Secret & © related to software)				
SciCo* v. Boston Scientific (*firm: Jeffer Mangel)	9:07-CV-00076-RHC	ED TX, Lufkin	2008 - 2009	P, t
(Patent related to catheters)				

Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Renishaw* v. TESA (*firm: Oliff & Berridge)	1:2008-cv-03485	ND IL, Eastern Div	2008 - 2009	P
(Patents related to manufacturing probes)				
Rambus v. Micron* (*firm: Quinn Emanuel)	04-431105	SCCA, San Fran	2008 - 2011	AT, t
(Antitrust claims)				
Harris* v. FedEx (*firm: Allen Dyer)	6:07-CV-1819-Orl-28KRS	MD FL, Orlando	2008 - 2010	P, t
(Patents related to ground based wireless communication)				
Omega* v. Lear (*firm: Allen Dyer)	6:07-CV-1422-Orl-31DAB	MD FL, Orlando	2008- 2011	P, t
(Patents related to vehicle alert and remote start)				
Arbitron* v. Int'l Demographics (*firm: Dickstein Shapiro)	2;06-cv-434(TJW)	ED TX, Marshall	2008 - 2009	P
(Patents related to measuring program audiences)				
LSI-Agere v. NSC* (*firm: Weil Gotshal)	337-TA-648	ITC	2008- 2009	P
(Patents related to IC process and structure)				
Affinity Labs* v. BMW (*firm: Duane Morris)	9:08-CV-00164	ED TX, Lufkin	2008 - 2010	P,t
(Patents related to portable audio player)				
Affinity Labs* v. Dice (*firm: Duane Morris)	9:08-CV-00163	ED TX, Lufkin	2008 - 2010	P
(Patents related to portable audio player)				
Affinity Labs* v. Alpine (*firm: Duane Morris)	9:08-CV-00171	ED TX, Lufkin	2008 - 2010	P, t
(Patents related to portable audio player)				

Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Affinity Labs* v. Apple (*firm: Duane Morris)	9:09-CV-00047	ED TX, Lufkin ND CA, Oakland	2008 – 2009 2010 - 2011	P,t
(Patents related to portable audio player)				
Fast Memory Erase v. Spansion* (*firm: Morrison Foerster)	3:08-CV-0977-M	ND TX, Dallas	2008 - 2011	P
(Patents related to memory source erase)				
Rambus v. nVidia* et al. (*firm: Fish & Richardson)	337-TA-2637	ITC	2008 - 2011	P
(Patents related to memory controllers)				
ITT* v. Celco et al. (*firm: Davidson Berquist)	09-190-JJF	DE	2009 - 2012	P
(Patent related to GPS position determination)				
Hitachi v. LGE* (*firm: Fish & Richardson)	2:07-CV-155-CE	ED TX, Marshall	2009	P
(Patents related to plasma displays)				
e-Digital v. Samsung* (*firm: Kirkland & Ellis)	2:08-cv-93	ED TX, Marshall	2009	P
(Patents related to handheld recording device)				
Sandisk v. LSI Corp* (*firm: Thompson & Knight)	3:2009-CV-02737-WHA	ND CA	2009	P
(Patents related to video decompression)				
TQP v. ING* (*firm: Duane Morris)	2:08-cv-00471-TJW-CE	ED TX, Marshall	2009 - 2011	P
(Patents related to encrypted data transmission)				
TAOS* v. Intersil (*firm: Munck Carter)	4:08-CV-451	ED TX, Sherman	2009 - 2015	P
(Patent related to optical detector)				

Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Avocent* v. The United States (Rose) (*firm: Davidson Berquist	08-69C	US Court of Federal Claims	2009 - 2011	P, t
(Patents related to video and data transmission, KVM control and OSD)				
GSM v. Non Typical* (*firm: Fee Smith Sharp & Vitullo)	6:07-CV-0177 LED	ED TX, Tyler	2009 - 2010	P,t
(False Advertising and Patents related to sports surveillance cameras)				
Arbitron* v. Kiefl (*firm: Dickson Shapiro)	1:09-CV-04013-PAC SD	NY, New York	2009 - 2010	P
(Patents related portable people meters)				
Guardian* v. RadioShack (*firm: Munck Carter)	3:2009-cv-00649	ND TX, Dallas	2009 - 2011	P
(Patent related to security and surveillance)				
Commil* v. Cisco/Aruba (*firm: Sayles Werbner)	3:07-CV-341	ED TX, Marshall	2009 - 2011	P, t
(Patent related to wireless communication protocol)				
Auburn* v. IBM (*firm: Fish & Richardson)	3 09-CV-694-WHA	MD AL, Montgomery	2009 - 2011	P
(Patent related to Reliability Testing of integrated circuits)				
ON Semi v. Hynix* et al (*firm: Quinn Emanuel)	6:09-CV-00390 LED	ED TX, Tyler	2009 - 2011	P
(Patents related to integrated circuits)				
Minerva* v. Motorola et al (*firm: Russ August)	2:07-CV-00229 CE	ED TX, Marshall	2009 - 2010	P
(Patents related to mobile entertainment)				
Minerva* v. Apple (*firm: Russ August)	2:07-CV-00019 TJW	ED TX, Marshall	2009 - 2010	P
(Patents related to mobile entertainment)				

Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Wacoh* v. ADI et al. (*firm: Clearman Prebeg)	2:09-CV-10119	MI	2010-2011	P
(Patent related to Testing Sensor)				
SynQuor v. Power One* (*firm: Fish & Richardson)	2;07-cv-497	ED TX, Marshall	2010	P, t
(Patents related to Power Converters)				
Freescale v. Respondents* (*firm: McDermott Will & Emery)	337-TA-709	ITC	2010 - 2011	P, t
(Patent related to Termination)				
Freescale v. Panasonic et al. (Funai*) (*firm: McDermott Will & Emery)	1:10-CV-00138-LY	WD TX	2010 - 2011	P
(Patent related to Termination)				
PACT v. Xilinx* (*firm: Kirkland & Ellis)	2:07-CV-563	ED TX, Marshall	2010 - 2012	P, t
(Patents related to Programmable Data Processing)				
Opti Inc. v. SIS & Via* (*firm: Buether Joe & Carpenter)	2:10-CV-279	ED TX, Marshall	2010 - 2013	P,t
(Patents related to Cache Memory Snooping)				
Avocent* v. Raritan (*firm: Davidson Berquist)	10-CV-6100	SD NY	2010 - 2012	P
(Patents related to KVM Switching)				
Key Energy v. Forbes* (*firm: Kennedy Clark & Williams)	2:08-CV-346	ED TX, Marshall	2010 - 2011	P, t
(Patents related to Remote Access Data Capture)				

Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Sandisk v. Kingston* (*firm: Fish & Richardson)	10-CV-243	WD WI	2010 - 2011	P
(Patents related to Flash Memory)				
Richtek Technology v. uPI* (*firm: Haynes & Boone)	C09-05679 WHA	ND CA, SF	2010 - 2013	P
(Patents related to dc-dc Power Controllers)				
Princeton* v. Canon (*firm: Duane Morris)	2:10-CV-00029-TJW	ED TX, Marshall	2010 -	P
(Patent related to video compression)				
Spansion v. Samsung* (*firm: Kirkland & Ellis)	08-855 (SLR)	DE	2011	P
(Patents related to Integrated Circuits)				
Samsung* v. Spansion (V) (*firm: Fish & Richardson)	1:10CV881	(LO/JFA) ED VA, Alex.	2011	P
(Patents related to Integrated Circuits)				
The Chamberlain Group* v. Decko et al. (*firm: Fitch Even)	1:10-CV-07843	ND IL, ED	2011 - 2012	P
(Patents related to garage door opener control systems)				
Asia Optical v. Laser Technology* (*firm: Hogan Lovells)	10-CV-251-JJF	DE	2011	P
(Patents related to laser distance mearsurement)				
CEATS* v. Continental Airlines et al. (*firm: McDermott Will & Emery)	6:10-CV-120 LED	ED TX, Tyler	2011 - 2012	P, t
(Patent related to interactive seating selection)				
Lutron v. Crestron* (*firm: Quinn Emanuel)	2:09-cv-707	CD UT	2011 - 2012	P
(Patents related to electronic control systems)				

Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Princeton* v. Ricoh (*firm: Trop, Pruner & Hu)	2:11-CV-39	ED TX, Marshall	2011	P
(Patents related to video compression)				
Freescale v. Respondents* (*firm: McDermott Will & Emery)	337-TA-786	ITC	2011	P
(Patent related to Termination)				
Alcohol Monitoring* v. BI (*firm: Latrop & Gage) DME-CBS	11-cv-00301-DME-CBS	CO	2011 -	P
(Patent related to alcohol monitoring)				
T-Netix, Inc.* v. Pinnacle Public Services, LLC (*firm: Gruber Hurst)	2:09-CV-00333-CE	ED TX, Marshall	2011 - 2012	P
(Patents related to penal institution telephone communication control)				
TattleTale* v. Calfee (*firm: Cooper & Elliott)	2:10-CV-226	SD OH, Columbus	2011 - 2012	P
(Patents related to portable alarm systems)				
Cypress* v. GSI et al (*firm: Morrision & Foerster)	337-TA-792	ITC	2011 - 2012	P, t
(Patents related to memory operation, architecture, and layout)				
Infineon* v. Atmel (*firm:Kirkland & Ellis)	1:11-cv-00307	DE	2011 - 2012	P
(Patents related to IC circuits and process)				
Cherdak v. Rack Room* (*firm: Lathrop & Gage)	1:11-CV-169 LO/ JFA	ED of VA	2011 - 2012	P
(Patents related to IC timing device for athletic shoes)				

Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
DRAM Mem Tech v. Etron* et al (*firm: Dickstein Shapiro)	8:11-CV-000332-DOC-SS	CD of CA	2011-2012	P
(Patents related to IC memory technology)				
Richtek Technology v. uPI Semi.* et al (*firm: Haynes and Boone)	337-TA-698	ITC	2011 - 2012	P, t
(Patents related to DC-DC Controllers)				
Solid State Storage v. STEC* (*firm: Akin Gump)	2:11-CV-391	ED TX, Marshall	2011 -	P
(Patents related to Memory and Memory Control)				
ParkerVision* v.Qualcomm (*firm:Allen,Dyer,McKool)	3:11-CV-719-J-37	MD FL, J.ville	2011 - 2012	P
(Patents related to Signal Down-Converting and Translation)				
Monolithic Power Systems* v. Silergy (*firm: Fish & Richardson)	CV-10-01533 CAS (AGR)	CD CA	2011	P
(Patents related to power supply boost)				
Oracle v. Micron* (*firm: Gibson Dunn)	CV10-4340	ND CA, San Jose	2011 - 2012	C
(Conspiracy, Agreement Compliance)				
Grail* v. Mitsubishi et al. (*firm: Niro Haller & Niro)	1-07-CV-098590	SC CA, Santa Clara	2011 - 2012	TS, t
(Improper disclosure and use of Trade Secrets)				
Grail* v. Renesas (*firm: Niro Haller &Niro)	C 11-03847	ND CA, San Fran	2011 -	P
(Patent related to inductive coupled memory)				
Round Rock v. ASUS* (*firm: Perkins Coie)	11-978-MSG	DE	2012 - 2013	P
(Patents related to die termination control and memory communication)				

Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Intellectual Ventures v. Hynix* (*firm: Quinn Emanuel)	1:10-cv-01066-UNA	DE	2012	P
(Patents related to die memory access and control)				
Omega* v. Skypatrol et al.(*firm: Allen Dyer)	11-24201-Civ-Moore/Torres	SD FL, Miami	2012 - 2013	P
(Patents related to vehicular tracking)				
Creative* v. Nintendo (*firm: Barnes & Thornburg)	2:10-cv-2735-AHM-VBK	CD CA, Western	2012	P
(Patents related to ROM memory array design)				
Beacon v. Honda* et al. (*firm: Fish & Richardson)	337-TA-814	ITC	2012	P
(Patents related to navigation)				
AVM* v. Intel (*firm: Goldstein; Boies)	10-610-RK	DE	2012 – 2013	P
(Patent related to dynamic logic circuits)				
Modec v. Floatec* (*firm: Duane Morris)	2011-68931	Harris County, TX	2012 - 2013	TS
(Trade Secrets and Confidential Information)				
Cian* v. Aeroflex (*firm: Skiermont)	3:11-cv-3349	ND TX, Dallas	2012	P
(Patent related to PC Compatible Modular Based Diagnostic System)				
Cian* v. Agilent (*firm: Skiermont)	3:11-cv-3351	ND TX, Dallas	2012	P
(Patent related to PC Compatible Modular Based Diagnostic System)				
Cian* v. National Instruments (*firm: Skiermont)	3:11-cv-3353	ND TX, Dallas	2012 - 2013	P
(Patent related to PC Compatible Modular Based Diagnostic System)				

Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Cian* v. Pickering (*firm: Skiermont)	3:11-cv-3354	ND TX, Dallas	2012	P
(Patent related to PC Compatible Modular Based Diagnostic System)				
Cian* v. Spirent (*firm: Skiermont)	3:11-cv-3356	ND TX, Dallas	2012	P
(Patent related to PC Compatible Modular Based Diagnostic System)				
Internet Machines v. PLX* (*firm: Baker & McKenzie)	6:11-cv-00250-MHS	ED TX, Tyler	2012 - 2013	P
(Patent re. PCI express switch)				
TPL v. Dell et al.*[3] (*firm: Hogan Lovells)	337-TA-841	ITC	2012 - 2013	P,t
(Patents related to Memory Interface Ports)				
Wacoh* v. Kionix, Inc. (*firm: Clearman Prebeg))	3:12-cv-00530	New York	2012 - 2013	P
(Patents related to inclinometer/accelerometer)				
Solid State Storage v. Fusion* (*firm: Baker Botts)	2:11-CV-391	ED TX, Marshall	2013	P
(Patents related to Memory and Memory Control)				
Smart Modular Technologies* v. Netlist (*firm: Schwegman)	2:12-CV-02319-MCE-EFB	ED CA	2012 -	P
(Memory Modules)				
NXP v. RIM* (*firm: Fish & Richardson)	6:12-cv-498-ACC-GJK	MD FL, Orlando	2013 - 2014	P
(Mask pattern density)				

[3] Additional Respondents: Seiko Epson (Kirkland & Ellis), HP (Kenyon & Kenyon), Brother (Banner Witcoff), Kingston (S J Christine Yang), Fujitsu (Morrison Foerster), HiTi Digital (Eastwind Consultants), Canon (Jones Day), Acer (K L Gates), Newegg/Rosewill (Web Law)

Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Kangaroo Media* v. Immersion Entertainment (*firm: Kenyon & Kenyon)	2:12-cv-00382-JFC	WD PA	2012 -	P
(Audio/Video Entertainment System patent)				
Nokia* v. HTC (*firm: Desmarais)	337-TA-847	ITC	2012 - 2013	P,t
(Signal transmission and attentuation)				
LendingTree* v. Zillow et al. (*firm: Sheppard Mullin)	3:10-CV-00439	WD NC, Charlotte	2013 - 2014	P
(Patents related to internet lending institution access and selection)				
Floatec* v. Magnuson (*firm: Duane Morris)	2011-54420	61st Judicial District, Harris County, TX	2012 - 2014	TS
(Misappropriation and Misuse)				
Affinity* v. Clear Channel (*firm: Duane Morris)	1:12-CV-00205-LY	WD TX, Austin	2013 - 2014	P,t
(Patent related to broadcast content)				
Synopsys* v. Mentor Graphics (*firm: Sidley Austin)	3:12-cv-06467-MMC	ND CA	2013	P
(Patents related to logic circuit description and synthesis)				
Affinity* v. Ford (*firm: Robins Kaplan ...)	1:12-cv-00580	EDTX, Beaumont	2013 - 2014	P
(Patents related to portable audio player)				
Affinity* v. GM (*firm: Robins Kaplan ...)	1:12-cv-00582	EDTX, Beaumont	2013 - 2014	P
(Patents related to portable audio player)				
Nokia* v. HTC (*firm: Desmarais)	337-TA-885	ITC	2013 - 2014	P
(Patents related to portable electronic device housing)				

Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Rothbaum v. Samsung Telecom America LLC* (*firm: Choate Hall & Stewart)	11-10509 (MLW)	DMA	2013 - 2014	CL
(Class Action)				
LendingTree* v. Zillow et al. (*firm: Sheppard Mullin)	3 :10-CV-00439 FDW-DCK	WDNC, Charlotte	2013 - 2014	P
(On-Line Mortgage Loan Transactions)				
Secure Axcess* v. Nintendo (*firm: Klemchcuk Kubasta)	2:13-CV-00032	ED TX, Marshall	2013 - 2014	P
(patents related to dual screen display)				
Fenner* v. CELLCO (*firm: Loewinsohn)	6:11-cv-348	ED TX, Tyler	2013	P
(patent related to telecommunication)				
Profectus v. Huawei, … Samsung* (*firm: Fish & Richardson)	6:11-cv-00474-MHS	ED TX, Tyler	2014	P
(patent related to digital picture frames)				
Galitski v. Samsung* (*firm: Lynn Tillotson Pinker & Cox)	3:12-CV-4782-D	ND TX, Dallas	2014 -	CL
(Class Action)				
Chrysler* v. Norman IP Holdings (*firm: Dickstein Shapiro)	PETITION FOR IPR - U.S. PATENT NO. 5,502,689	USPTO	2014 -	P
(Patent related to IC clock generation)				

Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Allure Energy* v. Nest Labs (*firm: Dickinson Wright)	9:13-CV-00102-RC	ED TX, Lufkin	2014 - 2015	p
(Smart Thermostat)				
Affinity* v. Ford (*firm: Robins Kaplan ...)	WA:13-CV-363	WD TX, Waco	2014	P
(Patents related to wireless media connectivity)				
Affinity* v. GM (*firm: Robins Kaplan ...)	WA:13-CV-370	WD TX, Waco	2014	P
(Patents related to wireless media connectivity)				
Affinity* v. Volvo (*firm: Robins Kaplan ...)	WA:13-CV-366	WD TX, Waco	2014	P
(Patents related to wireless media connectivity)				
Affinity* v. Honda (*firm: Robins Kaplan ...)	WA:13-CV-367	WD TX, Waco	2014	P
(Patents related to wireless media connectivity)				
Affinity* v. Nissan (*firm: Robins Kaplan ...)	WA:13-CV-369	WD TX, Waco	2014	P
(Patents related to wireless media connectivity)				
Affinity* v. Jaguar (*firm: Robins Kaplan ...)	WA:13-CV-368	WD TX, Waco	2014	P
(Patents related to wireless media connectivity)				
Affinity* v. Toyota (*firm: Robins Kaplan ...)	WA:13-CV-365	WD TX, Waco	2014	P
(Patents related to wireless media connectivity)				
Trover* v. Tyco (*firm: McDole Williams)	2:13-cv-0052	ED TX, Marshall	2014	P
(Patents related to Security Cameras)				
Radiall* v. Glenair (*firm: Oliff)	2:14-CV-00822-ODW	CDCA	2014 -	P
(Patent related to electrical connector)				

Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
LunarEye* v. Independent Witness (*firm: Prebeg Faucett Abbott)	9:05-CV-00188-RC)	EDTX, Lufkin	2014 -	P
(Patent related to trigger location telemetry)				
AMS* v. Soberkink (*firm: Lathrop & Gage)	IPR013-00577	USPTO PTAB	2014 -	P
(Patent related to sobriety monitoring)				
Infineon v. Volterra* (*firm: Weil Gotshal)	3:11-cv-06239-MMC	NDCA	2014	P
(Patents related to IC packaging)				
Volterra* v Primarion (*firm: Weil Gotshal)	CV-08-5129 (RS)	NDCA	2014	P
(Patents related to IC packaging)				
Infineon v. Volterra* (*firm: Weil Gotshal)	2:13-cv-684	EDTX, Marshall	2014	P
(Patents related to IC packaging)				
AMS* Reexam (*firm: Lathrop & Gage)	SN: 95/001,609	USPTO	2014 -	P
(Patent related to alcohol event monitoring)				
Triune Systems* v. Active-Semi (*firm: Farrow-Gillespie & Heath LLC)	296-03209-2013	Collin County	2014 -	TS
(Covenant not to compete)				
La Crosse* v. Ambient (*firm: Banner & Witcoff)	13-cv-833	WD WI	2014 - 2015	P
(Patents related to weather detectors)				

Cases (continued)

CASE[1]	CASE NUMBER	LOCATION	YEAR	TYPE[2]
Progressive Semiconductor Solutions v. Marvell Scemiconductor* (*firm: Fish & Richardson)	*Inter Partes* review petition re. 6,473,349	USPTO	2014 -	P
(Patent related to sense amplifiers for memory)				
Anderson v. Samsung* (*firm: Lynn Tillotson Pinker & Cox)	SACV-13-01028	CD CA, SD	2014 - 2015	CL
(Class Action)				
Netlist v. Diablo* (*firm: McDermott Will & Emery)	4:13-cv-05962-YGR	ND CA, Oakland	2014 - 2015	TS
(Technology related to Misappropriation of Trade Secret)				
Netlist v. Diablo* (*firm: McDermott Will & Emery)	4:13-cv-05889-YGR	ND CA	2014 -	P
(Patents related to DIMM DDR3 SDRAM load reduction and rank multiplication)				
Spherix* v. Uniden (*firm: Skiermont Puckett)	3 :13-cv-03496-M	ND TX, Dallas	2014 -	P
(Patents related to cordless phones)				
Spherix* v. VTech (*firm: Skiermont Puckett)	3 :13-cv-03494-M	ND TX, Dallas	2014 -	P
(Patents related to cordless phones)				
Securus* v. Global (*firm: Gruber)	3:13-CV-03009-K	ND TX	2014 -	P
(Patents related to telecom systems)				
Global v. Securus* (*firm: Gruber)	3:14-CV-0829-K	ND TX	2014 -	P
(Patents related to telecom systems)				
Samsung* v. NVIDIA (*firm: Kirkland & Ellis)	337-TA-941	ITC	2015 -	P
(Patents related to ICs and systems)				

OTHER CLIENTS

I have worked with other clients in various areas of my expertise, include "system, product, and process investigation," "patent valuation," "product liability and insurance claim investigation," "quality systems consulting and engineering," and "IP licensing." This work generally relates to patents, and may involve analysis of products either defensively or offensively. In no case does any of the work involve design of circuits, processes, or systems.

Certain of these clients are not to be revealed because of client confidentiality agreements, unless the Court requires such disclosure and confidentiality provisions are provided to protect such disclosure. Clients may retain services preparatory to filing a suit or even name me as an expert in a number of these possible or pending cases. However, these cases have not progressed as yet to deposition, or even to protective order signing, so it would be inappropriate to reveal these clients at this time.

Non-confidentially, I have represented a radiation effects testing company, ICS Radiation Technology. Further, I have worked with investment companies, such as Hatcreek Partners, reviewing potential investment opportunities, and have participated as a technical advisor to nLine Corporation, a company that developed a product for semiconductor wafer inspection using holographic High Aspect Ratio Inspection (HARI) technology.

These and other non-confidentially related companies are:

ICS Radiation Technology
- Consulting work related to nuclear radiation effects testing.

Creative Management Consultants (CMC)
- Consulting work related to Internet services, such as access service to clients and web site hosting services; providing business co-op services and internet product purchasing sites.

Hatcreek Partners
- Hatcreek Partners is an investment firm. I served as a technical advisor in reviewing the technology of investment opportunities.

nLine Corporation
- Member of Technical Advisory Board
- nLine Corp.'s business related to semiconductor holographic High Aspect Ratio Inspection (HARI) technology.

Texas Instruments
- Patent evaluation and application consulting.

OTHER CLIENTS (continued)

McAlexander Sound Pte Ltd
- Managing Director
- engineering consulting for Singapore based companies

Spirit Song Youth Equestrian Academy / Spirit Song Holdings
- CEO
- Equine Psychotherapy Program for abused / traumatized youth

Bethel Cannon Group / Bethel Cannon Holdings
- Partner
- Counseling / Event / Retreat Center / Hunting Lodge

Casualty Consulting Group of America
- Partner
- Assessment of structural damage caused by extreme weather events

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NEWTON's TELECOM DICTIONARY

23rd Edition

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NEWTON's TELECOM DICTIONARY

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Stay In Touch

For suggestions, corrections, updates, special offers, please send an email to Harry@HarryNewton.com.

I promise you I won't give your name to anybody. Nobody. Promise.

Harry Newton

APLT Advanced Private Line Termination. Provides the PBX user with access to all the services of an associated enhanced private switched communications services (EPSCS) network. it also functions when associated with a common control switching arrangement (CCSA) network. See Advanced Private Line Termination.

APM 1. Average Positions Manned, the average number of ACD positions manned during the reporting period for a particular group.

2. Advanced Power Management. A specification originally sponsored by Intel and Microsoft to extend the life of batteries in battery-powered computers. The idea of the specification is for the application programs, the system BIOS and the hardware to work together to reduce power consumption. An APM-compliant BIOS provides built-in power management services to the operating system of your PC. The operating system passes calls and information between the BIOS and the application programs. It also arbitrates power management calls in a multi-tasking environment (such as Windows) and identifies power-saving opportunities not apparent to applications. The application software communicates power-saving data via predefined APM interfaces. Windows 95 adopted APM to shut down the computer. It uses a special mode of the latest Intel processors – System Management Mode, or SMM. SMM lets the BIOS take control of the machine at any time and manage power to peripherals. A BIOS' APM support can't be circumvented by other software. This could cause a crash. Microsoft, Intel, Toshiba and others are now working on a new spec, called ACPI – Advanced Configuration and Power Interface. www.intel.com/IAL/power-mgm/apmovr.htm and www.ata.or/~acpi/.

APNIC Asia Pacific Network Information Center. A group formed to coordinate and promote TCP/IP based networks in the Asia-Pacific region. APNIC is responsible for management and assignment of IP (Internet Protocol) addresses in the Asia-Pacific, just as are ARIN and RIPE in the regions of the Americas and Europe, respectively. See also ARIN, IP, and RIPE.

APO Adaptive Performance Optimization. A technology used on the Texas Instruments ThunderLAN chipset, which was jointly developed by Compaq and Texas Instruments. APO dynamically adjusts critical parameters for minimum latency, minimum host CPU utilization and maximum system performance. This technology ensures that the capabilities of the PCI interface are used for automatically tuning the controller to the specific system in which it is operating.

Apocalypse, Four Horsemen Of The four horsemen of the Apocalypse were War, Plague, Famine and Death.

apogee The point on a satellite orbit that is most distant from the center of the gravitational field of the Earth. The point in an orbit at which the satellite is closest to the Earth is known as the perigee. In commercial application, the terms have most significance with respect to LEOs (Low Earth Orbiting) and MEOs (Middle Earth Orbiting) satellite constellations, which travel in elliptical orbits. See LEO and MEO.

apologize To lay the foundation for a future offense.

APON Originally specified by FSAN (Full Service Access Network) and subsequently standardized by the ITU-T as G.983.3, APON (ATM Passive Optical Network) is a local loop technology running the ATM protocol over single mode fiber. Synonymous with BPON (Broadband PON) APON runs at 155 Mbps or 622 Mbps downstream at a wavelength of 1490nm for voice and data and 1550nm for video transmission. The upstream speed is 155 Mbps at 1310nm for voice and data. The maximum logical reach of BPON is 20km, and the split ratio is 32:1. See also BPON, EPON, FSAN, GPON and PON.

APOT Additional Point Of Termination. The significance of APOT is that in the CLEC environment APOT is a requirement to submit LSR orders for collocation. These are some requirements that apply to APOT from Bell's point of view: APOT= Location "A" tie down information; CFA= Location "Z" tie down information; ACTL= Location "A" CLLI; LST= Location "Z" CLLI.

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appliance See Edge Appliance.

appliance creep Gadget creep in an enterprise network environment. For example, over time, various groups in the enterprise, including branch offices and remote sites, may install firewalls, intrusion detection systems, load-balancing devices, various types of WAN acceleration appliances, and other network devices, each of which performs a specific, narrow function. Each of these appliances also has power, interface, and space requirements, which create network management challenges. The figurative or literal string of appliances on a network is sometimes called an appliance conga line.

appliance conga line See appliance creep.

application A software program that carries out some useful task. Database managers, spreadsheets, communications packages, graphics programs and word processors are all applications.

application acceleration The use of one or more techniques by a WAN accelerator to improve perceived application response time across a WAN. These techniques include compression and coalescing.

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electronic game – the one meant to compete with the Sony Playstation.

PLB Personal Locator Beacons. See Personal Radio Services.

PLC 1. Planar Lightwave Circuit.

2. See PowerLine Carrier and also BPL.

PLCP Physical Layer Convergence Protocol. The part of the physical layer that adapts the transmission facility to handle DQDB functions as defined in IEEE 802.6-1990. It is used for DS-3 transmission of ATM. ATM cells are encapsulated in a 125microsecond frame defined by the PLCP which is defined inside the DS3 M-frame.

PLD Programmable logic device. PLDs used to be slow, big and expensive. Now they can be customized using a PC and their performance is close to that of the ASIC. See ASIC.

PLDS Private line data circuit. I don't know why it's an S, not a C.

pleading cycle The time period established by the FCC for third parties to submit written comments on a petition submitted by a carrier, broadcaster or other entity.

Please Do Not Tell Sales People Anything A memory aid for remembering the seven layers of the OSI Reference Model.

Please : Physical Layer (Layer 1)
Do : Data Link Layer (Layer 2)
Not: Network Layer (Layer 3)
Tell : Transport Layer (Layer 4)
Sales : Session Layer (Layer 5)
People : Presentation Layer (Layer 6)
Anything : Application Layer (Layer 7)

Please Do Not Throw Sausage Pizza Away See "Please Do Not Tell Sales People Anything."

pleasure All pleasure is sin, according to John Calvin.

plenum In some modern buildings, the ducts carrying the heat return are not metal ducts but actually are part of the ceiling. This is called a plenum ceiling. Most cities now have rules and regulations which say that if you run cabling through these plenum ceilings, you must not use cabling sheathed in PVC (polyvinyl chloride), the standard jacketing of most electrical cable. The reason is that PVC burns and emits toxic smoke ferociously. Plenum cable is low smoking so that if it catches fire it won't circulate toxic smoke through the vent system and suffocate everyone. Plenum cabling is often made of teflon. It's much more expensive than normal cabling. See also FEP, NFPNA 90A, plenum area and plenum cable.

plenum area The space between the drop ceiling and the floor above. Continuous throughout the length and width of each commercial building floor.

plenum cable Cable listed by Underwriters Laboratories for installation in plenums without the need for conduit. Cable specifically designed for use in a plenum, or air-handling space (the space above a suspended ceiling used to circulate air back to the heating or cooling system in a building) As specified by the NEC (National Electrical Code), plenum rated cable uses buffers, insulation and jackets made of low smoke, low toxicity, fire retardant material with a low flame spread index and a low potential heat (i.e., fuel load) level. Otherwise, a fire can travel along a cable, from room to room through walls, fanned by the air moving through the plenum, while giving off a vile, deadly smoke as it does so. The best plenum rated jacketing material generally is agreed to be fluorinated ethylene propylene (FEP), which Dupont markets as Teflon. Building codes now require the use of plenum rated cables in plenum spaces, and many contractors use it exclusively in plenum, riser and distribution applications. See also riser cable and distribution cable. Many buildings and many cities stipulate that only plenum cable can be installed in the plenum in the ceilings. Plenum cable has fully color coded insulated copper conductors and is available in various pair sizes.

plesiochronous Plesiochronous, based on Greek and Latin roots, roughly translates as "more together in time." Plesiochronous networks involve multiple digital synchronous circuits running at different clock rates. For instance, a Verizon T-1 circuit may meet a MCI T-1 circuit, with each taking making use of a different clocking source. Also for example, multiple MCI T-1 circuits may require multiplexing into a T-3 circuit; with the T-1's and the T-3 running at different clock speeds. In either case, the differences in clock speeds must be resolved through the use of a master clocking source such as a Stratum I clock, which relies on a highly reliable cesium clocking source. T-carrier and E-carrier networks are plesiochronous. Compare to Synchronous, Asynchronous and Isochronous. See also PDH.

plesiochronous networks Network elements that derive timing from more than one primary reference source. Network elements accommodate minor frequency differences between nodes.

PLL Phase Locked Loop: Phase Locked Loop is a mechanism whereby timing information is transferred within a data stream and the receiver derives the signal element timing by locking its local clock source to the received timing information.

PLLC Professional Limited Liability Corporation, as in a law firm.

PLM Public Land Mobile. See the next definition.

PLMN Public Land Mobile Network. A mobile telephone communications network established by a provider to facilitate mobile telecommunications services. This includes equipment, operations, and staff. A single provider may have more than one PLMN.

PLMR Private Land Mobile Radio system.

Plotter A type of computer peripheral printer that displays data in two-dimensional graphics form.

PLS Premises Lightwave System.

PLSC Private Line Service Center.

PLTS Private Line Transport Service. Non-switched communications channel from one customer location to another. May be leased from a Local Exchange Carrier or Interexchange Carrier.

PLU See Percent of Local Usage.

plug A male element of a plug/jack connector system. In the Premises Wiring System it provides the means for the user to connect his communications devices to the Communications Outlet as well as the means to disconnect his service at the Network Interface Jack when trouble analysis is required.

plug 'N play 1. Manufacturers' concept of how easy it is to install their equipment. "Why it's just plug 'n play," says the manufacturer. In reality, nothing, absolutely nothing, is plug 'n play. It's a fantasy concept. See Plug and Play.

2. Also defined as a new hire who doesn't need any training. "The new guy, Harry, is great. He's 100% plug-and-play."

plug and peer A term used by VoIP peering services to describe the advantage of using their interconnection service. The basic idea is that a VoIP provider that signs up with a VoIP peering service will enjoy instant connectivity to the networks of all other VoIP providers that use the peering service. A VoIP provider that uses a VoIP peering service only has to concern itself with establishing a connection between its own network and the peering service's network; the peering service handles the rest. This spares each individual VoIP provider the time and expense of establishing network connections and interconnection agreements with other individual VoIP providers. See VoIP peering.

plug and play This explanation comes from an Intel Technology Primer: Since add-in cards first appeared over a decade ago, they've given users a lot of different ways to improve their PCs and given them a lot of installation headaches. In this brief, we'll tell you how Intel, together with industry leaders, has spent years developing Plug and Play technology to make add-in cards both easier to use and install. Never before has the PC had as many capabilities as it does today. That's due in part to the large number of add-in cards available, like those for multimedia and faxmodems. Yet, as more cards are added to a PC, their installation can become quite complex. Installing a card can be a time-consuming and technical process, and there's no guarantee it will even work the first time. Sometimes the user must configure the card manually, which means selecting a variety of system resources for each card. These include Interrupt Requests (IRQ), I/O and memory addresses, and Direct Memory Access (DMA) channels. Every PC has a limited number of these resources available. Each card is designed to use a small group of them. Assigning these resources means opening the computer and physically setting the jumpers and DIP switches. And since no standard has been set to determine which cards can use which resources, numerous conflicts can arise between cards. Often, it's a process of trial and error to determine which resources aren't already being used by other cards. Since the ISA bus was introduced, several new bus architectures have followed to solve the resource allocation problem. For example, the MCA and the EISA bus standards both defined a mechanism where add-in cards were configured somewhat automatically. These bus architectures allocated the resources, but the process wasn't always flexible and still required some manual intervention. And they still left the current ISA cards without a solution. Plug and Play technology, co-developed by Intel and other industry partners, consists of hardware and software components that card, PC, and operating system manufacturers incorporate into their products. With this technology, the user is responsible for simply inserting the card. Plug and Play makes the card capable of identifying itself and the resources it requires. The system's software automatically sets up a suitable configuration for the card. Newly developed PCI and Plug and Play ISA cards are all built to eliminate user intervention during the installation process. See plug and play BIOS extensions.

plug and play BIOS extensions Software code added to a PC's bios which purports to automatically recognize which peripherals are in the PC and automatically configure the PC for those peripherals – without the need for fiddling with dip switches or setting interrupts, etc. Plug and Play comes from Intel. And more and more PC cards are coming Plug and Play compatible. See plug and play.

NEWTON's TELECOM DICTIONARY

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ATM Application Program Interface
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Apologize To lay the foundation for a future offense.

APON ATM Passive Optical Network. A passive (i.e., with no repeaters or other active electronics) optical network running ATM. APON is used in the local loop to connect terminal devices to an all optical network running the ATM protocol. See also ATM, Fiber Optics, PON, and SONET.

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Application Class An SCSA term. A group of client applications that perform similar services, such as voice messaging or fax-back services.

Application Entity A cellular radio term. An Application Entity provides the service desired for communication. An Application Entity may exist in an M-ES (Mobile End System) (i.e., mobile application entity) or an F-ES (Fixed End System). An Application Entity is named with an application entity title.

Application Equipment Module AEM. A Northern Telecom term for a device within the Meridian 1 Universal Equipment Module that supports Meridian Link Modules. The Meridian Link Module (MLM) is an Application Module, specially configured to support the Meridian Link interface to host computers.

Application For Service A standard telephone company order form that includes pertinent billing, technical and other descriptive information which enables the company to provide communications network service to the customer and its authorized users.

Application Framework This usually means a class library with a fundamental base class for defining a complete program. The framework provides at least some of the facilities through which a program interfaces with the user, such as menus and windows, in a style that is internally consistent and abstracted from the specific environment for which it has been developed.

This is an explanation I received from Borland. I don't quite understand it, yet. An application framework is an object-oriented class library that integrates user-interface building blocks, fundamental data structures, and support for object-oriented input and output. It defines an application's standard user interface and behavior so that the programmer can concentrate on implementing the specifics of the application. An application framework allows developers to reuse the abstract design of an entire application by modeling each major component of an applications as an abstract class.

Application Gateway A firewall that applies security mechanisms to specific applications, such as FTP and Telnet servers. An application gateway is very effective but can impose a performance degradation.

Application Generator AG. A program to generate actual programming code. An applications generator will let you produce software quickly, but it will not allow you the flexibility had you programmed it from scratch. Voice processing "applications generators," despite the name, often do not generate programming code. Instead they are self-contained environments which allow a user to define and execute applications. They are more commonly called applications generator, since one generator can define and execute many applications. See Applications Generator for a longer explanation.

Application Layer The topmost, visible to the user, presentation of a communications network; the user interface point in network architectures. See Open Systems Interconnection — Reference Model.

Application Level Firewall A firewall system in which service is provided by processes that maintain complete TCP connection state and sequencing. Application level firewalls often re-address traffic so that outgoing traffic appears to have originated from the firewall, rather than the internal host.

Application Metering The process of counting the number of executions of the copies of an application in use on the network at any given time and ensuring that the number does not exceed preset limits. Application metering is usually performed by a network management application running on the file server. Most application metering software will allow only a certain number of copies (usually that number specified in the application software license) of an application to run at any one time and will send a message to any users who try to exceed this limit.

Application Module A Northern Telecom term for a computer that can be attached to a Northern Telecom phone system and add intelligence and programmability to the phone system. Often, the AM will be a computer conforming to open standards, such as DOS or Windows, or it may be VME-based.

ond line is 212-206-6871 and so on. It is valuable to know the plant test numbers of your incoming WATS lines so you can test the local loop part of those lines. The local loop part is the part which typically gives the most problem. It is, unfortunately, the only part of your 800 lines you can test yourself — unless you ask someone (or several people) to call you regularly on your 800 lines, just to test them. You can get plant test numbers out of your local and/or your long distance carrier. When they tell you those numbers are "not available," beg a little. They are available and you are entitled to them. Calling plant test numbers costs exactly what a normal long distance IN-WATS call on that line costs. So keep your test calls short. You should call your plant test numbers once a day.

Planthump A colloquial word for a telephone company craftsperson. It derives from the term "plant," a telephone company word used to describe their "factory" — i.e. everything from their inside plant, their central office switch, to their outside plant, which includes wire strung on telephone poles. In British slang, "hump" means to exert oneself. Planthump is a term of endearment in the telephone industry. Definition courtesy, Steve Marcus, New York Telephone, now called Bell Atlantic. The term is often spelled as two words, i.e. plant hump.

PLAR Private Line, Automatic Ringdown. In telecommunications, leased voice circuit that connects two single instruments together. When either handset is lifted, the other instrument automatically rings.

Plasma An ionized gas with a mixture of positive and negative electrons. See PLASMA DISPLAY.

Plasma Display Type of flat visual display device in which selected electrodes, part of a grid of crisscross electrodes in a gas-filled panel, are energized, causing the gas to be ionized and light to be emitted. Some computers use plasma displays. They're fabulous, and quite expensive. See Plasma Display Panels.

Plasma Display Panels PDPs. Plasma gases composed of helium, neon and xenon are sandwiched into cells between two vertical glass plates. Bursts of electricity are applied between transparent electrodes attached to one pane of glass. These bursts causes the plasma gases to emit ultraviolet rays. This activates red, blue and green phosphor dots, which emit visible light and form pictures on the screen. The more common cathode ray tube technology (e.g. computer monitors) uses an electron gun to direct a beam that lights up phosphors on a screen. Directing that beam requires CRT sets to be deep, heavy and unwieldy.

Plasmatron The name Sony chose for a flat screen display it demoed at Comdex in the fall of 1995. The screen measured 20 inches diagonally. It was as bright as normal CRT screen, but was less than four inches wide. It is the beginning of flat screen entertainment screens for the home. It was spectacular.

Plaster Ring A metal or plastic plate that attaches to wallboard for the purpose of mounting a telecommunications outlet box.

Plastic Fiber Optics See Plastic Optic Fiber.

Plastic Optic Fiber POF. A fiber optic transmission medium made from plastic, rather than glass. Glass clearly (double entendre intended) performs better than plastic, as it offers less attenuation and, therefore, better transmission quality at higher speeds and over longer distances. Plastic, however, is less expensive and less susceptible to breakage. POF uses low-quality light sources and carry data at speeds greater than 10 Mbps over distances up to 100 meters. The ATM Forum is developing specifications for 50- and 155-Mbps transmission over POF. POF is evolving as a replacement for twisted-pair copper wire. see Plastic Fiber Optics.

Plasticizer A chemical agent added in compounding plastics to make them softer and more flexible.

Plat 1. An imaging term. When a CAD/CAM plotter prints a large drawing, it's called a plat. 2. A map or plan of a small piece of ground showing boundaries, area, remainder, ownership, access, and other pertinent information.

Plate The anode in a vacuum tube, which collects the electrons emitted by the filament.

Plate Battery The source of E.M.F. connected in the plate circuit to give the plate element its positive charge.

Plate Voltage The potential applied to the plate of the vacuum tube by the plate voltage supply.

Platen A cylinder in a printer or typewriter around which the paper goes and which the printing mechanism strikes to produce an impression.

Platform A loosely-defined word for a software operating system and/or open hardware, which an outsider could write software for. Windows98 is a platform. So is Windows 2000. If every phone system were a platform, then every owner of that phone system could write software for his phone system or buy outside-produced software and have his phone system work more to his liking. That's the objective of creating a "platform." See also OAI and Platform Independence.

Platform Independence A term from IBM and Metaphor Computer Systems. The idea, they say, is to produce a layer of software that would rest atop any operating system on any piece of hardware. The applications developers would write their software just once, rather than start from scratch each time they wanted get their software working on a different computer. If the whole idea sounds rather daunting, you're right.

Platter The round magnetic disk surfaces used for read/write operations in a hard disk system.

Play Off In voice processing, in response to questions such as "Press one for Harry," the user touchtones buttons on his phone. Those buttons generate DTMF (Dual Tone Multi-Frequency) tones. The system has to figure out what the person "said" with his touchtones. The tricky part of DTMF detection is distinguishing between tones generated from an actual "key press" and "tones" caused by speech. Mistaking a person's speech (as in leaving a message) for DTMF is called "talk-off." Mistaking a person's recorded speech (as in playing back a message) for DTMF is called "play-off."

You can imagine the havoc poor DTMF detection can cause a voice processing system. For example, if touchtoning three means "delete this message" and while playing the message, the system incorrectly detects a portion of the message playback as the touchtones for a key press three, I'll delete the message when I had intended to listen to it. On the other hand, if I'm listening to a message and want to delete it prior to finishing the message, I want the system to detect my key press three as the real thing and go ahead and delete the message.

Playback Retrieval, decoding and transmission of encoded data. It is also a multimedia term. Playback is the process of viewing multimedia materials created by an author. Playback can include a range of activities, from viewing a single video clip to participating in a series of interactive multimedia training modules. Some playback applications (for example many training and presentation applications) are sold separately from their authoring applications. However, many developers are selling authoring and playback capabilities in a single product.

Playback Head The part which converts the magnetic information on the tape or disk into an electrical signal. Moving the magnetic fields on the medium (tape or disk) past the playback head generates a tiny voltage, which is picked up in a conductor (a coil) in the payback head and sent onto the electronic equipment where it is amplified or transmitted.

Player An SCSA definition. A resource object that plays TVM data. The audio data can come from a voice or audio encoded file, or from text that has passed through a text-to-speech service. The output of a player can be analog audio, TDD, ADSI, etc.

PLCP Physical Layer Convergence Protocol. The part of the physical layer that adapts the transmission facility to handle DQDB functions as defined in IEEE 802.6-1990. It is used for DS-3 transmission of ATM. ATM cells are encapsulated in a 125microsecond frame defined by the PLCP which is defined inside the DS3 M-frame.

PLD Programmable logic device.

Plenum In some modern buildings, the ducts carrying the heat return are not metal ducts but actually are part of the ceiling. This is called a plenum ceiling. Most cities now have rules and regulations which say that if you run cabling through these plenum ceilings, you must not use cabling sheathed in PVC (polyvinyl chloride), the standard jacketing of most electrical cable. The reason is that PVC burns and emits toxic smoke ferociously. Plenum cable is low smoking so that if it catches fire it won't circulate toxic smoke through the vent system and suffocate everyone. Plenum cabling is often made of teflon. It's much more expensive than normal cabling. See also FEP.

Plenum Area The space between the drop ceiling and the floor above. Continuous throughout the length and width of each commercial building floor.

Plenum Cable Cable specifically designed for use in a plenùm (the space above a suspended ceiling used to circulate air back to the heating or cooling system in a building). Plenum cable has insulated conductors often jacketed with polyvinylidene diflouride (PVDF) material to give them low flame spread and low smoke-producing properties. Burn a normal PVC cable and it will give off a vile, toxic smoke that can kill. Many buildings and many cities stipulate that only plenum cable can be installed in the plenum in the ceilings. Plenum cable has fully color coded insulated copper conductors and is available in various pair sizes.

Plesiochronous Plesiochronous, based on Greek and Latin roots, roughly translates as "more together in time." Plesiochronous networks involve multiple digital synchronous circuits running at different clock rates. For instance, a NYNEX T-1 circuit may meet a MCI

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multiple MCI T-1 circuits m
T-3 running at different clo
be resolved through the us
relies on a highly reliable
siochronous. Compare to
Plesiochronous N
than one primary referenc
ferences between nodes.
PLL Phase Locked Loop:
is transferred within a dat
locking its local clock sour
PLLC Professional Limite
PLMN Public Land Mobi
lished by a provider to fac
ment, operations, and stat
Plotter A type of con
graphics form.
PLS Premises Lightwave
PLSC Private Line Servic
PLTS Private Line Transp
tomer location to another.
Carrier.
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